

WHAT IS CLAIMED IS:

1. A switch of a network comprising:

a topology database having configuration information; and

a mechanism for sending the configuration information from the topology database to the network and for receiving configuration information from the network and storing it in the topology database.

2. A switch as described in Claim 1 wherein the sending and receiving mechanism include a switch agent for receiving configuration information from the network.

3. A switch as described in Claim 2 wherein the switch agent looks up in the topology database and returns requested information of an SNMP query from the network.

4. A switch as described in Claim 3 wherein the switch agent forms an SNMP query to the network.

5. A switch as described in Claim 4 wherein the topology database has all configuration information of the network.

6. The switch as described in Claim 5 wherein the configuration information includes the name of the switch.

7. A switch as described in Claim 6 wherein the configuration information includes an IP address of the switch.

8. A switch as described in Claim 7 wherein the configuration information includes a software version of the switch.

9. A switch as described in Claim 8 wherein the configuration information includes hardware type of the switch.

10. A switch as described in Claim 9 wherein the configuration information includes a unique ID of the switch.

11. A switch as described in Claim 10 wherein the configuration information includes a remote node index of the switch.

12. A switch as described in Claim 11 wherein the configuration information includes nodal flags of the switch.

13. A switch as described in Claim 12 wherein the configuration information includes an interface name for the address of the switch.

14. A telecommunications system comprising:

S switches, where S is an integer greater than or equal to 2, each switch having a topology database with all configuration information of the S switches, any one switch providing all the configuration information for all of the S switches.

15. A system as described in Claim 14 wherein the switches send configuration information to each other.

16. A system as described in Claim 15 wherein the switches send SNMP queries to each other to return retrieved configuration information from each other, and the switches respond to the SNMP queries by sending the requested configuration information to the other switches which sent the SNMP queries.

17. A system as described in Claim 16 wherein the switches attach a systems information group to a nodal information group to propagate the configuration information to the other switches in response to an SNMP query.

18. A system as described in Claim 17 wherein the switches have one or more logical nodes.

19. A system as described in Claim 18 wherein the nodes form a first PNNI peer group.

20. A system as described in the Claim 19 including a plurality of PNNI peer groups.

21. A system as described in Claim 20 wherein any node of the first PNNI peer group can provide all the configuration information for the first PNNI peer group.

sub a 16)
22. A method for operating a telecommunications network comprising the steps of:

placing configuration information of a first switch of the network into a topology database of the first switch; and

propagating the configuration information of the first switch to a second switch of the network.

sub a 17)
23. A method as described in Claim 22 wherein the first and second switches are in a PNNI peer group, and after the propagating step, there is the step of retrieving configuration information for all the switches in the PNNI peer group from the first switch.

24. A method as described in Claim 23 wherein before the propagating step, there is the step of sending an SNMP query from the second switch to the first switch for configuration information in the topology data base of the first switch.

sub a 17)
25. A method as described in Claim 24 wherein the propagating step includes the steps of attaching a system information group having the configuration information from the

~~y data base of the
nodal information
tion group attached
switch.~~